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Application of CAPM in Measuring Risk and Return for Selected Markets of Iran's Economy

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Capital asset pricing model (CAPM) is an equilibrium model which uses to show the relationship between the risk and return of an individual asset or portfolio of assets. According to the portfolio theory, investors use diversification in order to reduce unsystematic risk. Efficient portfolios will dominate other investments and each investor will select one of the efficient portfolios based on the degree of his risk-aversion. Previous studies done in Iran or other countries on CAPM, considered the application of the model for individual stocks, portfolios of stocks, specific assets, or the market indexes. Only few studies applied the CAPM for major real assets of the economy. Considering this gap of research that extended this model to other markets, this study applies the CAPM to measure systematic risk and expected return of selected markets in Iran's economy, currency market, stock market and real estate market, for the period from the first quarter of 1995 to the second quarter of 2007. The research results showed that negative relationship exist between systematic risk with realized and expected return of the currency market, a negative relationship between risk and expected return rate in the stock market, and a positive linkage between these two variables in the real estate market. Furthermore, there is no significant relationship between risk and realized return in the stock and the real estate market. GDP also can be a suitable market index to test the CAPM in two markets of currency and stock in Iran's economy.

Field of Research: Finance, Capital Asset Pricing Model, Systematic risk, Expected Return, Real Return

1. Introduction

CAPM is an equilibrium model used to show the relationship between risk and expected return for individual assets and for portfolios. CAPM assume that investors use diversification in an attempt to reduce unsystematic risk. According to the portfolio theory, efficient portfolios will dominate other investments and each investor will select one of the efficient portfolios based - on the degree of his risk-aversion (Treynor 1961; Sharp 1964; Lintner 1965).

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To date, various studies have been done to describe the relationship between risk and expected return of stock market in Iran and other countries. These studies mostly considered stocks of one company, the stocks combination of some companies, specific assets, or the market indexes. They mainly attempt to answer two questions (1) how the risk of assets should be measured, and (2) What relationship exist between risk and expected return of investors (i.e. Basu 1977; Bakhshande 1990; Hamedani and Pirsalehi 1993; Shafizadeh 1995). To answer these two questions, first it is assumed that investors are able to select their preferred portfolio among different portfolios based on the expected return and the variance. Second, all investors agree on investment horizon and distribution of expected returns of assets, and also there are no imperfections in the capital market (Copeland, Weston and Shastri 2005).

On the other hand, the empirical research mostly investigated the asset's return dependence on the market return and also the linear relationship between risk and expected return in each selected stock markets (i.e. Lakonishok and Shapiro 1986; Shafizadeh 1995; Zarif fard and Ghaemi 2003). In general, studies on CAPM model were not limited only to the stock markets, this model was also used in other markets to explain the relationship between risk and return (i.e. Kullmann 2001; NG 2003; Jafari samimi et al., 2006).

Many of research about CAPM in the context of stock markets in one hand and the lack of research to extend this model to other markets in the other hand provide this opportunity to generalize CAPM to other markets. In other words, this study will apply CAPM to estimate the systematic risk and expected return in three selected markets in the Iranian economy, namely, real estate market, stock market, and currency market from the first quarter of 1995 to the second quarter of 2007.

This study in addition to estimating the systematic risk for these three selected markets based on CAPM, tried to find out the following (1) Is there a significant relationship between the systematic risk and the corresponding rate of expected return in these three markets, (2) Is there a significant relationship between the systematic risk and the realized return in the selected markets, and finally If so, what type of relationship exists? In addition, since three macro markets of Iran's economy are considered in order to test the CAPM, then it is necessary to find a suitable measure that shows the market performance so well. Therefore, this paper seeks to find whether exist a significance relationship between GDP as market index and realized return as independent variable in each markets.

This paper is organized as follows; Section II discusses the existing empirical literature on the CAPM and its development in other areas. Section III states the applications in measuring the systematic risk and return of three selected markets. The data used in the study and the methodology is explained in Section IV, and finally the results and findings of research are concluded in Section V.

2. Literature Review

The CAPM is a pricing model that relates the expected return rate of an individual security to single index (Sharpe 1964; Lintner 1965). The sensitivity of the asset return to changes in that index is a measure of the asset systematic risk. In fact, the index may be any variable thought to be the dominant influence on stock returns and need not be a stock index (Jones, 1991).

The CAPM predicts that the expected return on an asset above the risk-free rate is linearly related to the non-diversifiable risk, which is measured by the asset's beta. The CAPM is a single-period ex ante model. However, since the ex ante returns are unobservable, researchers usually rely on realized returns to test the validity of the CAPM. Jagannathan and Wang (1996) show that the lack of empirical support for the CAPM may be due to the inappropriateness of basic assumptions made to facilitate the empirical analysis. For example, most empirical tests of the CAPM assume that the return on broad stock market indices is a good proxy for the return on the market portfolio of all assets in the economy. However, these types of market indexes do not capture all assets in the economy such as human capital.

Benz (1982) found that adding the market value of the firms to the regression between return and stock beta helps to have a better clarification for the average return of company's stock differences. Lakonishok and Shapiro (1986) found that there is a weak relationship between beta with stock return, and a significant relation between market's prices of stock return with stock return.

To conclude, the testing of the CAPM is susceptible to many difficulties such as finding a suitable market proxy. To overcome this problem, Hou (2003) used a hypothetical market portfolio to proxy the true market portfolio in the CAPM testing. This aggregate market portfolio has GDP as its dividends. As a result, it is supposed to include every factor that contributes to the accumulation of wealth. This approach is particularly relevant to this study since we will test three different markets and no other proxy can serve as a market portfolio for the selected markets.

In Iran, many studies were empirically done on CAPM (i.e. Bakhshande 1990; Hamedani et al., 1993; and Shafizadeh 1995). The evidence shows a linear relationship between risk and return in Tehran Stock Market. Furthermore the research findings of Pourreza (2000) detected a significant relation between stock return, portfolio, macro and monetary factors of the economy. Shafiezadeh (1995) showed that systematic risk and return have significant relation, so that non linear relationship helps to have a better clarification for the relation of systematic risk and stock return in comparison with linear models. In continue, Zariffard and Ghaemi (2003) mentioned that measuring systematic risk alone can't satisfy the stock return changes.

In all studies mentioned above, CAPM were empirically used to analyse the risk and return in stock markets (mainly companies stocks). Researches which studied the applications of CAPM in other economic activities proved that CAPM has capabilities to be used for analysing other assets, especially for assets in the macro economy.

Using an intertemporal multifactor CAPM, Doukas, Hall and Lang (1999) tested whether foreign currency exposure is priced in the capital market of Japan. This study relies on the assumption that the currency-risk premium changes through the time in response to changes in business conditions and investors' perception of risk. Their asset pricing model tests showed that the foreign exchange-rate risk premium is a significant component of Japanese stock returns. Specifically, the results suggested that currency-risk exposure controls a significant risk premium for multinational and high-exporting Japanese firms. The currency risk factor is found to be less influential in explaining the behavior of average returns for low-exporting and domestic firms. However, it is shown to exhibit large return volatility that is likely to be perceived by investors, who wish to control portfolio risk, as an important underlying source of risk.

Kullmann (2001) used CAPM to examine whether residential and commercial real estate risks carry positive risk premiums. He found strong evidence for the hypothesis that both residential and commercial real estate risks are priced by the market and therefore have a definite role in empirical asset pricing specifications. The research evidence showed that returns of real estate market are not sensitive to the pricing of the assets.

Ng (2003) investigated the relationship between average return of currency market and the stock market of U.S., Japan, Germany and England. He mentioned that international CAPM has a great potential to be used to analyze risk and return for the two main economic assets in those countries, i.e. the Stock market and foreign exchange market. Jafari samimi et al., (2006) applied the combined method of Markowitz efficient portfolio and CAPM on petro-chemistry, gas injection, and gas export in Iran. They found optimal portfolios which derived from various allocations to different gas consumption choices and also create the best value in different risk levels, through the Markowitz efficient portfolio theory. The authors reached to an efficient frontier by combining all of these efficient portfolios. Then through implementing CAPM they found the efficient portfolio. Based on this model Jafari samimi et al., (2006) computed the efficient portfolio for alternative combinations of petro-chemistry, gas and gas injection projects in five different scenarios of 100, 200, 300, 400, 500 million cubic meters.

This study will add to the literature in a sense that CAPM will be utilized in new markets for the first time to determine the systematic risk of three selected markets in Iran and also use the GDP as replacement measure of market index.

3. Methodology

To measure the systematic risk of the three major economic markets, first the required variables for the CAPM should be calculated for each of them. Required variables are return for each asset, risk free return, portfolio return (or return of total market).

The calculation of each asset's return and risk free return is no major problem; however the main problem is selecting an appropriate alternative criterion. In the calculation of company's stocks systematic risk, total return of the stock market or total return of the specific industry is considered as an index. But when we look at the selection of appropriate assets from macro approach, the chosen index should indicate the average return of the investments in the entire economy. If an investor is going to invest in one of these three major selected markets, the main assumptions of CAPM should be considered as i) the ability of choosing among the different portfolios based on the investors' desired expected return and the variance ii) The information about investment horizon and the distribution of asset's return are clearly exist.

Thus for each of the markets the same return will be expected. On the other hand an investor can invest in every other markets of the economy and obtain the same return. The average return of total economy can be a suitable criterion for portfolio return, because the economic growth achieved from average return of all markets' returns in an economy, and one expects that with investing in each of the economy markets obtain an average return equal to the economic growth, and if the obtained return was less than the amount, he gain less than the portfolio return and vice versa. In choosing the growth of GDP to proxy the market portfolio we are following (Hou 2003). He used GDP as a hypothetical market portfolio to proxy the true market portfolio in the CAPM testing.

So the average return of total economy can be a good criterion that a person can consider if he wants to invest in any of these three selected markets. Economic growth indeed can be defined as a return of physical and human capitals exists in an economy in a specific period. In other words, a person with utilizing his human and physical capitals- respect to the production function in the economy– can add to the production flow of the economy.
If K considers as the amount of physical capital of a person, and L considers as the human capital, an investor who utilizes his capital in the economy can obtain certain amount of return. The average expected return depends on the production function of the entire economy. Therefore, one can expect Q amount of production in T periods of time through average production function of economy F, with applying his capitals:

$$Q_t = F(K_t, L_t) \tag{1}$$

A change in production in each periods of time is due to the changes of human and physical capitals:

$$dQ_t \Big/ dt = \frac{\partial F}{\partial K} \cdot \frac{dK}{dt} + \frac{\partial F}{\partial L} \cdot \frac{dL}{dt} \quad (2)$$

$$\frac{\frac{dQ_t}{dt}}{Q_t} \equiv \dot{Q} = \frac{\partial F_t}{\partial K_t} \cdot \frac{K_t}{Q_t} \cdot \frac{dK_t}{dt} \cdot \frac{1}{K_t} + \frac{\partial F_t}{\partial L_t} \cdot \frac{L_t}{Q_t} \cdot \frac{dL_t}{dt} \cdot \frac{1}{L_t} \quad (3)$$

$$\dot{Q} = \frac{\partial F_t}{\partial K_t} \cdot \frac{K_t}{Q_t} . \dot{K} + \frac{\partial F_t}{\partial L_t} \cdot \frac{L_t}{Q_t} . \dot{L} \quad (4)$$

$$\dot{Q} = \eta_K \dot{K} + \eta_L \dot{L} \quad (5)$$

These equations indicate that economic growth in specific period of time is due to the growth of the one's human and physical capitals. If obtained return was less than this amount it means that he gain less than portfolio return and vice versa.

To measure systematic risk for the three selected markets of the economy first returns for all of them were calculated. In order to find the Currency market return, the percentage of dollar exchange rate in non-official foreign exchange market of Tehran was considered. For Currency, the owner of one dollar note will gain return with the increase in the dollar exchange rate. For Stock market, the percentage change in total index of Tehran Stock Exchange was considered, because it is assumed that one's stock price will be increased in average the same amount as the total stock market increase. Finally, for the estate market, total percentage changes of house rental index in large cities and property index, rental fees and business activities as an outcome of housing and real estate is considered.

As for the risk free rate of return, short-term interest rates for deposits has been used. Meanwhile, for the growth rate of GDP, the constant 1996 prices compared with the same quarter at the previous year, as the return criterion was considered. All data used are quarterly and include the years from 1995 to 2007. All data were gathered from time series data bank of Central Bank of Islamic Republic of Iran. The expected rate of return is the rate of return when one invest in an asset and expect to gain benefit with the proportional amount of imposed risk in the future.

4. Discussion of Findings

To measure the systematic risk of each market, first the average rate of return for the market and the portfolio return were calculated. Then variance of the market prices, market correlation, and systematic risk during the selected period was determined.

Since the linear regression is applied to test the research hypotheses and the existence of time series for the research variables, each independent and dependent variables should be tested to confirm their stationary by using the testing of unit root. According to this test, all independent and dependent variables of this research are stationary due to being lower than the absolute

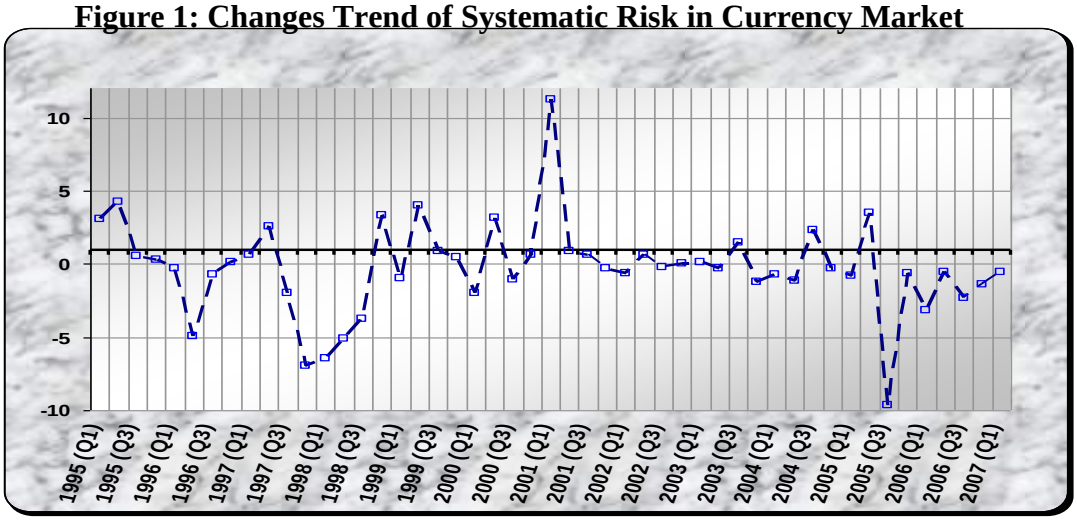
value of ADF Statistic relative to each the critical values and being lower than 0.05% of P-Value.

To continue, each of the selected markets is analysed in terms of the CAPM assumptions.

4.1. Currency Market

The currency market is considered as a vital substitute market for formal markets in Iran's economy. Risk of this market explains the sensitivity of the expected return fluctuations of investment in currency with the portfolio return. Changes in exchange rate risk indicate is less than 1 for most of the selected periods (Figure 1). This means that the expected return of investor when invests in the currency market is lower than portfolio return. Low systematic risk during research periods explains two points. Firstly, risk-averse individuals willing to invest in currency market during these periods. Secondly, because of low risk of investment, investors' return is also low, so they are not willing to invest in this market. One of the most important reasons might be because of one-rate policy applied for the currency market by government which led to eliminating the arbitrage opportunities in the market.

Figure 1: Changes Trend of Systematic Risk in Currency Market

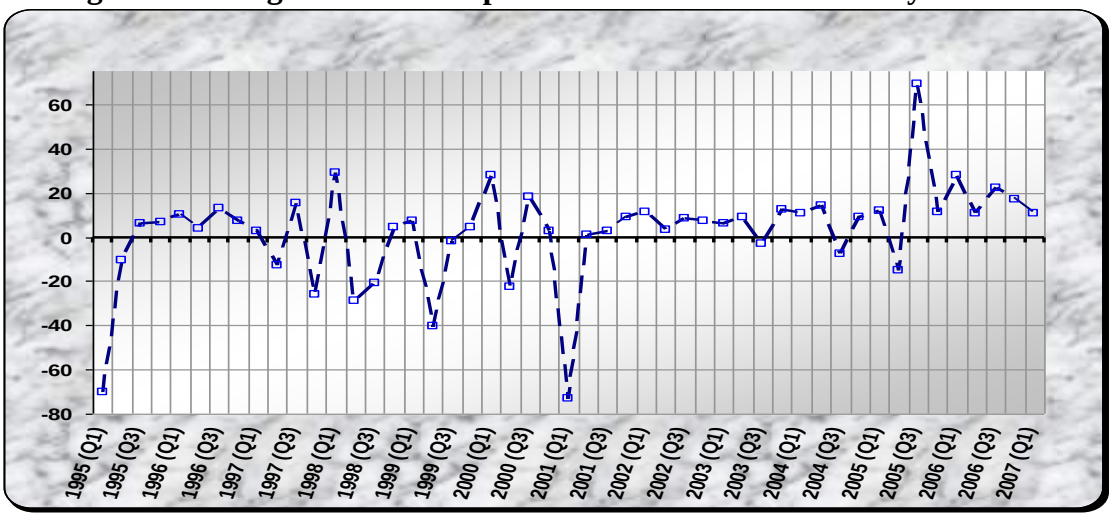


Changes expected return rate for the currency market as presented by figure 2 and 3 indicates that there is an asymmetric changes between systematic risk and return. This imply when systematic risk increases in one period, investors expect that return will increases as well. This is true from the third quarter of 1998 to the end of research period. These trends can be due to various reasons: controlling policies of currency markets by central bank, other markets were more attractive in comparison with currency market in some research periods and also applying one-rate policy to eliminate the arbitrage opportunities in this market after 2001.

Linear regression between systematic risk (independent variable) and expected return rate (dependent variable) were used to test whether there is a significant relationship between risk and expected return rate in currency market.

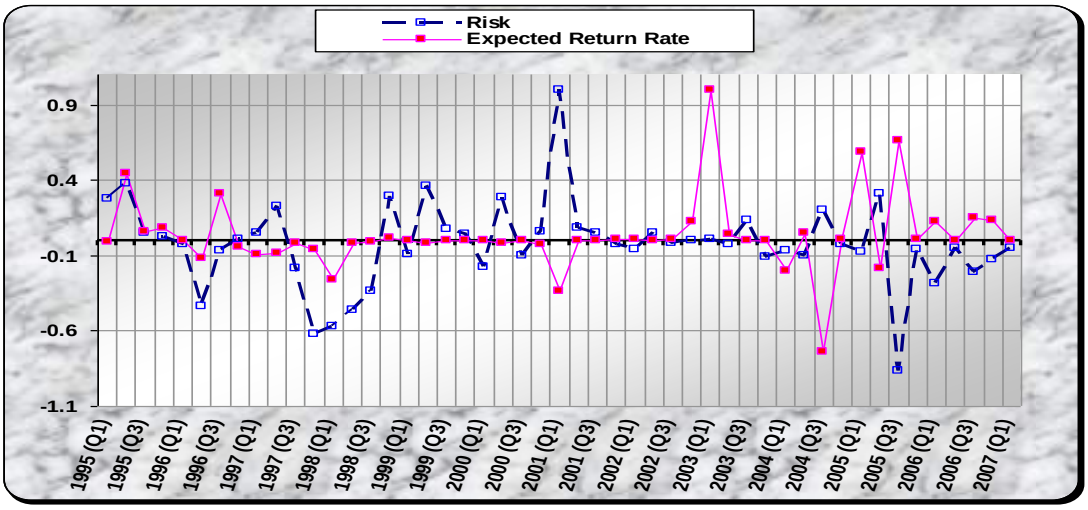
$\begin{cases} H_0 : \beta_1 = 0 & \text{There isn't significant relationship between systematic risk and expected return rate} \\ H_1 : \beta_1 \neq 0 & \text{There is significant relationship between systematic risk and expected return rate} \end{cases}$

Figure 2: Changes Trend of Expected Return Rate of Currency Market



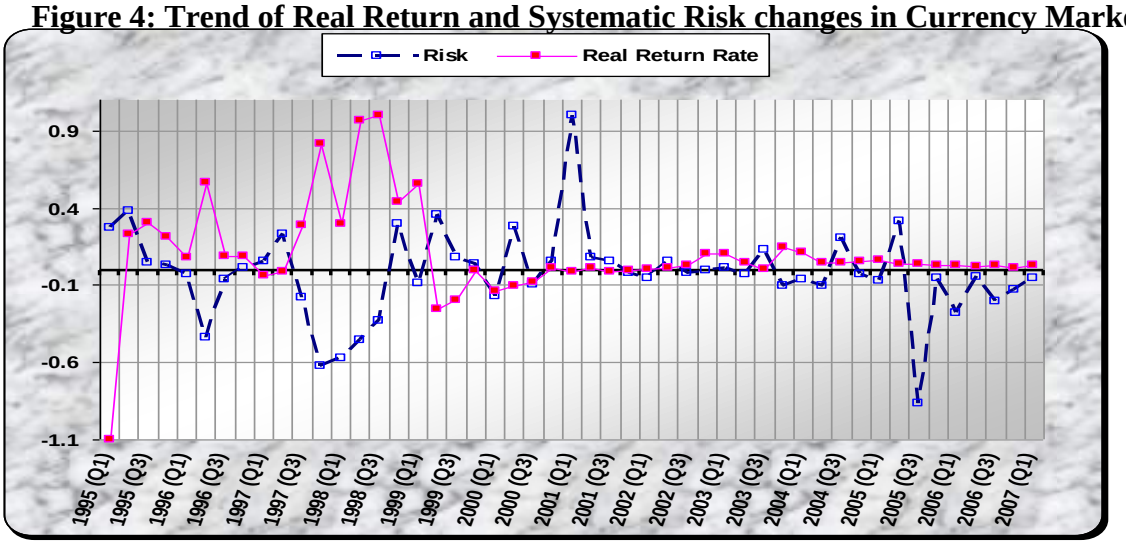
Generally, when the regression coefficient is positive it means that there is a positive relationship between risk and return. Therefore, the market will be in equilibrium, and risk and return will change in the same direction, this status is compatible with the concepts of CAPM. Therefore, the regression results of systematic risk and expected return rate show that return coefficient is significant in 5% level, so H_0 is rejected, it means that there is a significant relationship between risk and expected return rate in Iran's Currency market. Furthermore, coefficient of independent variable is negative, so the relationship between risk and return will be negative during research period. This means that investors don't get the return amount coordinated with the corresponding risk, and so the market is not in equilibrium. R^2 also is equal to 43% that is acceptable due to existence of only one descriptive variable in regression equation (Table 1).

Figure 3: Changes Trend of Expected Return and Systematic Risk of Currency Market



To describe the relationship between the risk and return more accurately, another model based on the systematic risk and real return is used. As shown in figure (4), the trend of systematic risk and real return changes are relatively coordinated (Although, some period has experienced low coordination). Changes of real return have decreased considerably from the third quarter of 1998 to the second quarter of 1999. This trend seems to be stable for the rest of the period.

Figure 4: Trend of Real Return and Systematic Risk changes in Currency Market



The real return fluctuations decreased from 2001 onwards due to the policy of one-rate for currency rate. The ability of the central bank to control the irregular fluctuations of the currency which has made also can be another factor that explains this fluctuation. This policy considerably led to the decrease of real and expected return for this market, so the market attractiveness severely declined for risk-loving investors.

The results of regression between systematic risk and real return of currency market are similar to the results of expected rate of return, so that return coefficient is significant and P-Value is equal to (0.0310) that means H_0 rejection. Furthermore, coefficient of independent variable is negative, R^2 also is equal to (39%).

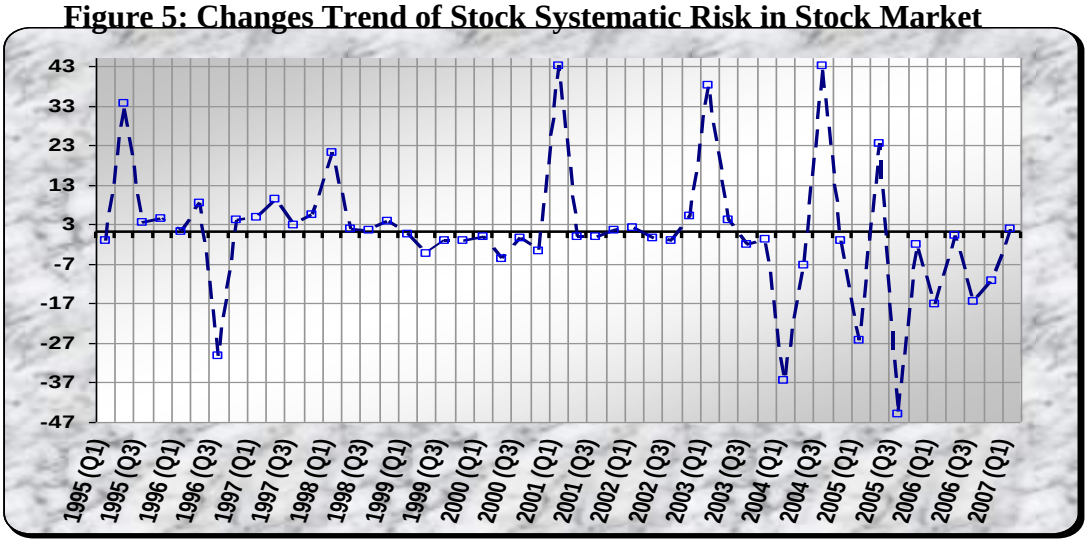
4.2. Stock Market

The trend of systematic risk changes for stock market indicates that the risk index is higher than 1 in some periods (i.e. 3th and 4th quarter 1995, 4th quarter 1996 to 2nd quarter 1998). This implies that investors expect to get higher returns than portfolio return during the cited periods. Therefore, these periods are attractive for less risk-averse individuals. For some other periods which the systematic risk is lower than 1, investors expect to get lower returns in comparison with the portfolio return; especially this trend is observable at the end of research period. The positive trend of changes at the first quarter of 2001 and 2003, the third quarter of 2004 and the second quarter of 2005 are due to public behaviour for using stock market as a suitable market to invest, which established the local stock markets. Other factors that

contributed to this are improved and regulated the controlling laws for stock market, developing broker forums, and investment consulting companies.

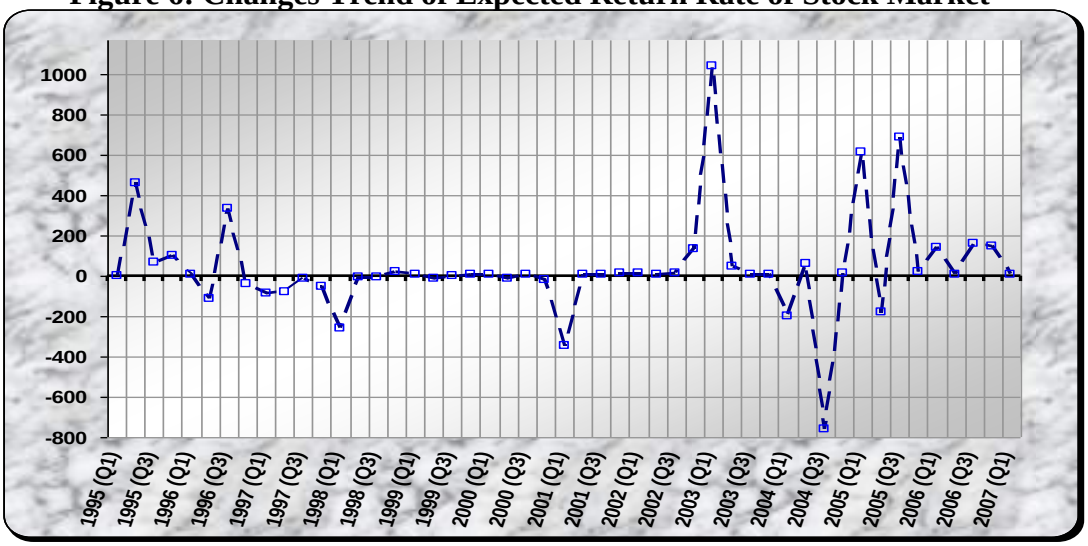
As shown in figure 5, the systematic risk is lower than (1) from the third quarter of 2005 to the second quarter of 2007, this trend was simultaneous with the recession periods of Iran's stock market. The main reasons of this recession were the management changes in economy, political shocks resulted by economy sanctions, state structures of Iran's economy and the dependency of many companies to the government which decreases the applicants to finance in stock market.

Figure 5: Changes Trend of Stock Systematic Risk in Stock Market



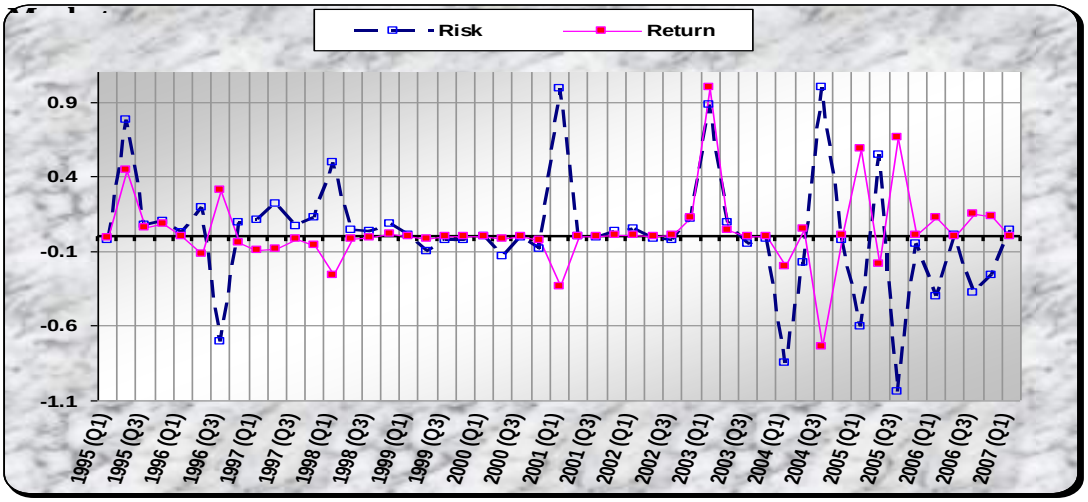
Investigations on the trend of expected return rate and systematic risk changes in the stock market (Figure 6 and 7), show the coordinated movements between systematic risk and expected rate of return from the first quarter of 1995 to the first quarter 1996, and also from the second quarter 2001 to the second quarter of 2004. In the other periods this relationship was opposite, and the peak of this trend observed at the end of research period. This status probably is due to existence the political shocks resulted by macro management changes of government, and also economic sanctions.

Figure 6: Changes Trend of Expected Return Rate of Stock Market



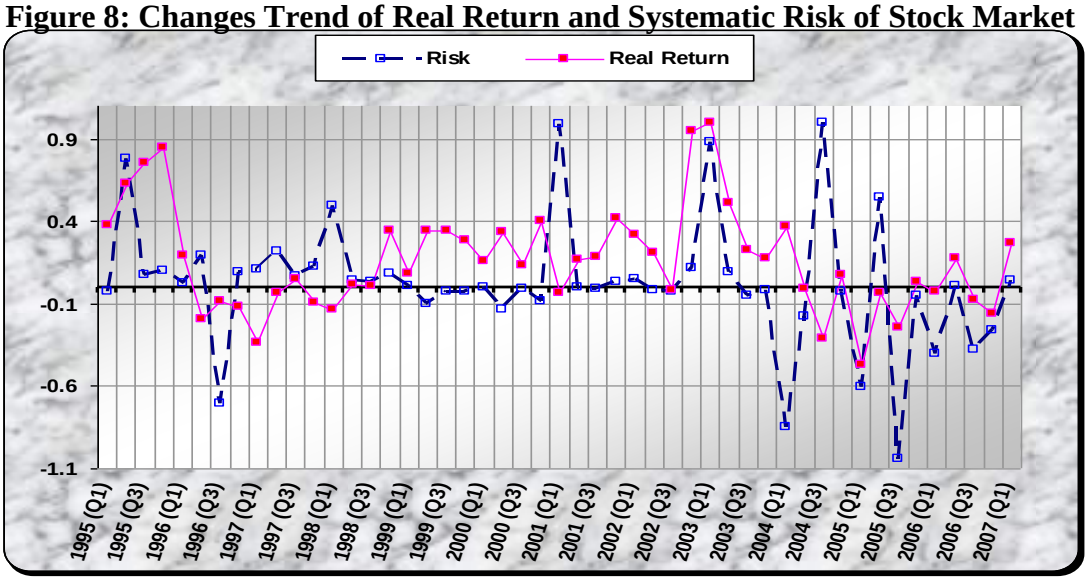
The result of testing the significance of the systematic risk and expected return rate in stock market indicates that the return coefficient is significant in 5% level and P-Value is equal to (0.0329), so hypothesis H_0 is rejected. The return coefficient of stock market is negative which shows the inverse relationship between risk and expected return during the research period. This result is not compatible with the key principle of CAPM, which is "higher risk higher return". R^2 also is equal to 0.091 that is very low.

Figure 7: Changes Trend of Expected Return and Systematic Risk of Stock



The systematic risk and real return rate despite the primary quarters have coordinated fluctuations at some periods (Figure 8). The regression results between systematic risk and real return explain accepting of hypothesis H_0. The F statistic is (2.13) that shows the regression is not significant, despite the research sample which detects there is a positive relationship between risk and real return and emphasizes on attractiveness of the market for risk-averse individuals, this linkage is not significant statistically.

Figure 8: Changes Trend of Real Return and Systematic Risk of Stock Market

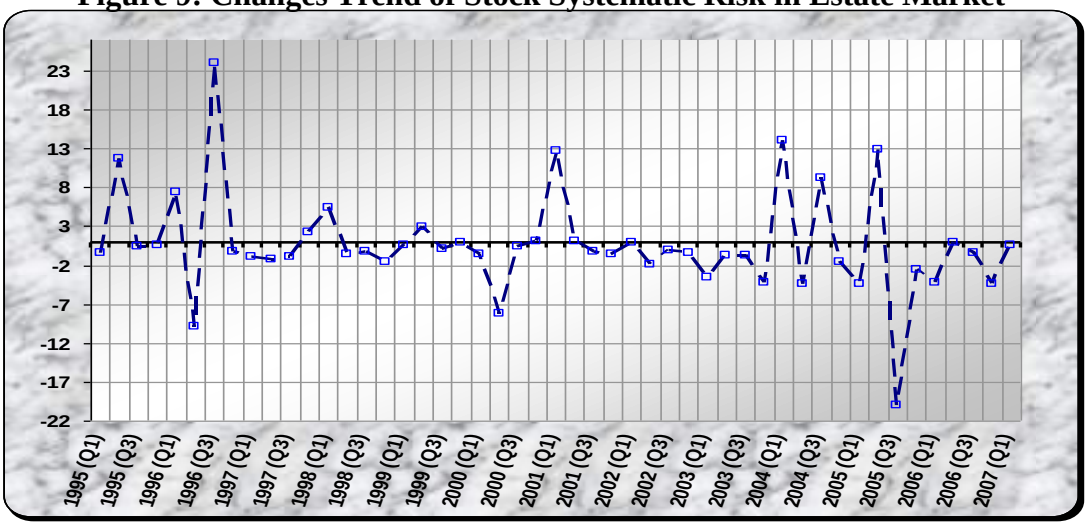


4.3. Real Estate Market

The real estate market is perceived as an important market in Iran economy that attracts the extra funds of investors. Real estate market has been facing systematic risk higher than 1 in many quarters such as the second quarter of 1995, the first and third quarter of 1996, the first quarter of 1998, and so on (figure 9). This means that if investors invest in this market, they expect to get higher returns than portfolio return during the mentioned periods.

In fact, when the systematic risk is low (i.e. during 2006 and 2007) it decreases the individuals interest to invest in this market because they know that will gain less return, and the decrease in investments in this market will lead to the recession of estate market.

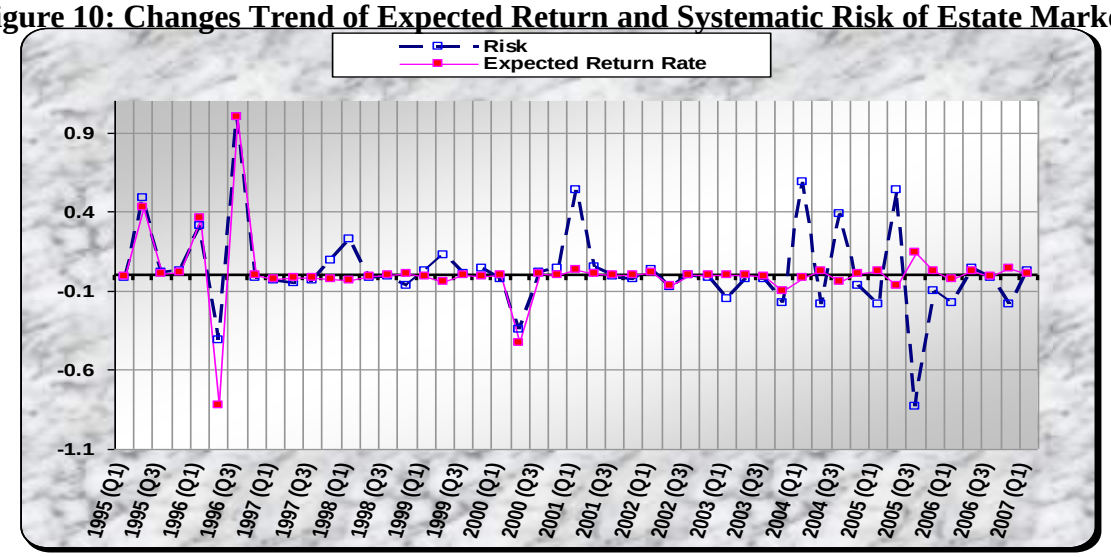
Figure 9: Changes Trend of Stock Systematic Risk in Estate Market



The trend of expected rate of return and systematic risk is shown in Figure 10. It indicates that except for some quarters (1995, 1996 and 1997), estate

market is completely in equilibrium, and the coordination between risk and expected return is very high. But coordination between these two variables relatively declines at other periods, especially at the end of research periods.

Figure 10: Changes Trend of Expected Return and Systematic Risk of Estate Market



The result of regression test shows that return coefficient is significant in 5% level and P-Value is equal to 0.0001, so H_0 is rejected. Therefore, if individuals invest their extra funds to get return, they will get higher returns according to the higher risk and vice versa. R^2 also is equal to (0.47) that relatively is acceptable.

Figure 11. Changes Trend of Real Return and Systematic Risk of Estate Market

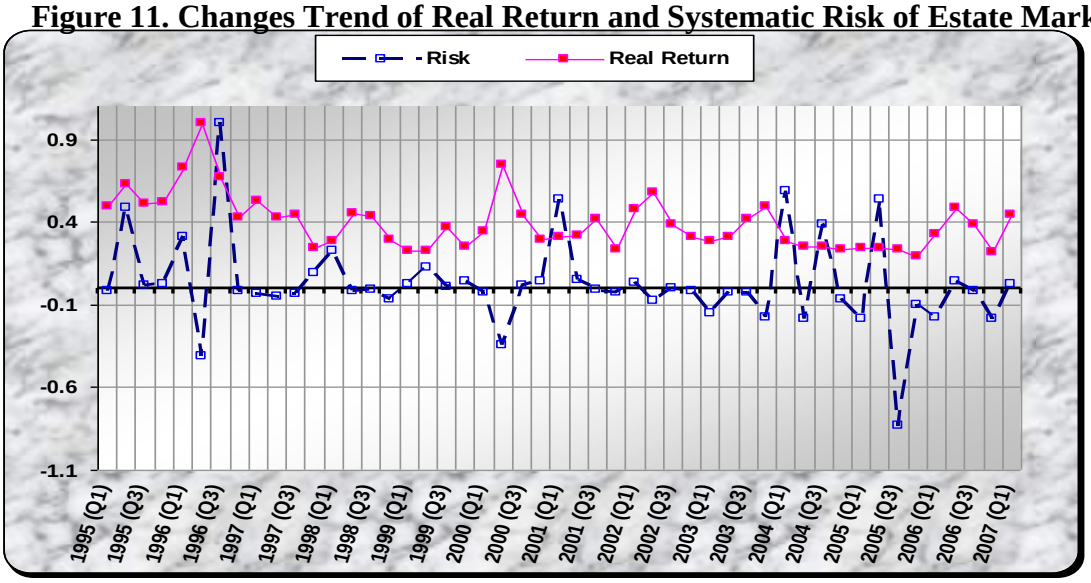


Figure 11 shows that positive changes was experienced from the first the periods to the first quarter of 1996, then uncoordinated trends started till the first quarter of 2006, this trend then has improved from 2006 to the end of research period. Furthermore, negative systematic risk has experienced at the most of periods. The least amount of real return is in the second quarter of 2005 and 2006 which are the recession periods of estate market in Iran. After this period, the real return has increased from the 4th quarter of 2006, it was coincident with the price increase of this market's assets.

The regression results show that the estimated model is meaningless due to rejection of the null hypothesis of total significance test.

4.4. CAPM Test with GDP

To estimate the model of CAPM with GDP, the simple OLS is performed by using the regression between GDP as independent variable and realized return as dependent variable for currency market. As shown in table 1, result of the model reject the null hypothesis in level of 0.05, means that exist the significance relationship between realized return of currency and GDP and it is a positive linkage. The estimated model doesn't have disturbance involving heteroskedasticity, autocorrelation and misspecification along with high normality for data. R2 of model is 0.12 that shows other variables can affect on dependent variable.

OLS also is performed by using the regression between GDP and realized return for stock market. Result of the model reject the null hypothesis in level of 0.05 means that exist the significance relationship between realized return of stock and GDP. The estimated model doesn't have disturbance involving heteroskedasticity and misspecification, but autocorrelation exist in the model. Therefore, it is added a variable of AR (1) to the model to solve the autocorrelation. R2 is 0.36 that shows other variables can affect on dependent variable.

Table 1. The Regression Result of Each Research Hypothesizes

Market	Variable	Coefficient	t-Statistic	R-squared	Prob.
Currency	Expected Return and beta	-4.731574	-5.883117	0.432835	0.0000
	Real Return and beta	-0.386275	-2.225163	0.399674	0.0310
	Realized Return and GDP	3.150751	2.745078	0.140762	0.0086
Stock	Expected Return and beta	-4.649302	-2.196514	0.091334	0.0329
	Real Return and beta	0.134149	1.464210	0.042755	0.1497
	Realized Return and GDP	0.923840	2.083889	0.366647	0.0429
Estate	Expected Return and beta	3.113276	4.284494	0.472366	0.0001
	Real Return and beta	0.016640	0.192732	0.000773	0.8480
	Realized Return and GDP	1.519919	0.785998	0.012707	0.4357

5. Conclusion

In this study, the relationship between systematic risk and return in three selected markets of Iran economy were analyzed utilizing the CAPM.

To measure the systematic risk of these three selected markets, first the required variables for the CAPM model were collected. Required variables were rate of return for each market, risk free return, and market index. In the calculation of company's stocks systematic risk, total return of the stock market or total return of the specific industry is considered as an index. Here also the calculation of each asset's return and risk free return was no major problem, the main problem was selecting an appropriate index, because when we look at the selection of an appropriate index form the macro approach, the chosen index should indicates the average return of the investments in the entire economy.

In this case, for each of the three markets the same return will be expected, also an investor can invest in every other markets of the economy and obtain the certain return. Thus, the average return of total economy could be a suitable proxy for market index, because the economic growth achieved from average return of all markets' returns in an economy, and one expects that with investing in each of the economy markets obtain an average return equal to the economic growth.

After calculating the systematic risk and analyzing its trend, this study found that in all three selected markets systematic risk fluctuations increase considerably from (1995) to (2007). These results might be because of uncertain situations of the country during sanctions, changes of management teams at decision making levels in Iran and also inefficient policies of central bank to control the price fluctuations in these markets.

Trend of expected return changes in the currency market indicates that there is no positive relationship between risk and return, and also found that changes of risk and return toward each other is not in tandem (despite the CAPM concept). Some reasons might be because of control policies applied from central bank of Iran to the currency market or attractiveness of other markets in some periods to the investors, single pricing policy of currency, and no opportunity for arbitrage after 2001.

Changes trend of systematic risk in the stock market indicated the mentioned risk from the first quarter (1999) to the end of research period, except in six quarters, were lower than (1), which means the stock market was attractive for risk-averse investors during that period. The graph was negative or close to zero at the most mentioned periods, the peak was from (2005) onwards which are corresponding to the recession periods of stock market. In other world, this trend is consistent with stock market recession from (2005).

Respect to the analyses of the relationship between the systematic risk and the real return in the Currency market and Stock market, this study found that in each of these two markets there is a negative relationship among

systematic risk and expected return and also the real return (except the relationship between risk and real return in stock market) In other words, this pattern in these two markets is not consistent with CAPM.

Although regressions done for investigating those relationships in Estate market and shows that positive relation exists between systematic risk and expected return, but between systematic risk and the real return in this market no significant relationships were found.

So this study concludes that in the financial markets of Iran economy, (Currency and Stock markets), taking more systematic risks do not guarantee the higher returns, but this expectation exists in physical assets market (Estate market). Therefore CAPM forecasts are not compatible in the financial markets of Iran economy. It might be because the financial markets of Iran are not developed very well, or investors are not quite familiar with the market. Also the higher returns of physical markets encourage people to invest in Estate market instead of financial markets.

Furthermore, other section of this paper is relevant to use the GDP as a market measure to test the CAPM in these three markets. The evidence shows that there is the significance relationship between GDP and the realized return of currency and stock market in Iran's economy. In other world, GDP can be an appropriate market index in estimating the relation between risk and return in currency and stock market.

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